

REMARKS:

Applicants acknowledge the Examiners' comments on the Figures, and believe the Figures comply with all applicable regulations. Structure 7 in the Figures is described in the specification as a "P-type deep drain implant" that bears the label "P-Body" in the Figures. Structure 4 in the Figures is described in the specification as an "N-type epitaxial layer," but can also properly be referred to as a "body" (or an element of a "body") of the device in which it is included. P-type lightly doped drain implant 6 and structure 7 are elements of an extended drain region formed in structure 4.

The Examiner has indicated that claims 32 and 33 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. In response, claim 32 is rewritten in independent form. Applicants believe that claims 32 and 33 as amended are in condition for allowance.

Claims 1-10 stand rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,306,652 ("Kwon"). In response, Applicants contend for the following reasons that claims 1-10 are patentable over Kwan.

Kwan describes an LDMOS device (shown in Kwan's Fig. 4) including a drain 36, an epitaxial layer 34, and a drift region 24. Even if one assumes for the sake of argument that Kwan's drain 36, layer 34, and region 24 correspond respectively to the drain, deep drain implant, and lightly doped drain implant recited in claim 1, claim 1 is patentable over Kwan since Kwan neither teaches nor suggests a PMOS device having a drain junction breakdown point, a maximum impact ionization point, a body, and an extended drain region including a drain, a deep drain implant, and a lightly doped drain implant, wherein at least one of the drain junction breakdown point and the maximum impact ionization point is located within at least one of the body and the extended drain region so as to reduce any drain breakdown voltage walk-in exhibited by the device below a predetermined value, as recited in claim 1.

Kwan teaches (at col. 4, lines 19-21) that the Fig. 4 device can be implemented so that breakdown occurs beneath drain 36 rather than at the surface. However, this does not amount to a teaching or suggestion that the Fig. 4 device can or should be implemented so that its

drain junction breakdown point or maximum impact ionization point is located so as to reduce any drain breakdown voltage walk-in exhibited by the device (i.e., located in such a position that any drain breakdown voltage walk-in exhibited by the device has a magnitude below) a predetermined value.

The explicit limitation in claim 1 that at least one of the recited drain junction breakdown point and maximum impact ionization point is located so as to reduce any drain breakdown voltage walk-in exhibited by the device below a predetermined value (i.e., is located in such a position that any drain breakdown voltage walk-in exhibited by the device has a magnitude below a predetermined value) is a structural limitation of the claimed device. Applicants contend that the claimed device is a new device (because the noted structural limitation is not present in any prior art device having the other recited limitations); not an old device having newly discovered functionality which functionality is present inherently in a prior art device, or an old device implemented in accordance with a new process. Applicants also contend that the claimed device is not a new use for a prior art device. Thus, the cited case law does not address the essential issue raised by the rejection, which is whether Kwan teaches or suggests the noted structural limitation of claim 1, or whether the device disclosed in Kwan inherently has a drain junction breakdown point or maximum impact ionization point located so as to reduce any drain breakdown voltage walk-in exhibited by the device below a predetermined value (and thus inherently has the structure recited in claim 1). The Office Action does not identify any such teaching or suggestion in Kwan, and does not take the position (or identify any basis determinable from art of record for the position) that a device disclosed in Kwan inherently has a drain junction breakdown point or maximum impact ionization point located so as to reduce any drain breakdown voltage walk-in exhibited by the device below a predetermined value.

Applicants note that the expression “drain breakdown voltage” (or “Bvdss”) “walk-in” is defined in the specification of the present application (with reference to an MOS device that has undergone stress) to denote “the phenomenon that the magnitude of the device’s post-stress drain breakdown voltage is less than its pre-stress drain breakdown voltage.” Kwan fails to discuss the phenomenon of drain breakdown voltage walk-in, and neither teaches nor suggests that any device disclosed therein could or should be implemented so that

its drain junction breakdown point or maximum impact ionization point is located so as to reduce any drain breakdown voltage walk-in exhibited by the device below a predetermined value. Nor is there any basis determinable from Kwan in support of the position that any device disclosed in Kwan is inherently implemented so that its drain junction breakdown point or maximum impact ionization point is located so as to reduce any drain breakdown voltage walk-in exhibited by the device below a predetermined value. The Office Action does not include any contention that any device disclosed in Kwan is inherently so implemented. It would be improper to reject claim 1 over Kwan on the basis of a bare assertion (unsupported by any basis determinable from a reference of record) that a device disclosed in Kwan is inherently so implemented.

Furthermore, Kwan neither teaches nor suggests a device in which (and there is no basis determinable from Kwan in support of the position that a device disclosed in Kwan is inherently implemented so that):

its drain junction breakdown point and maximum impact ionization point are located sufficiently far from the gate that the device exhibits no significant drain breakdown voltage walk-in (as recited in claim 2 or 4) or any drain breakdown voltage walk-in exhibited by the device has absolute magnitude not greater than two volts (as recited in claim 3).

In view of the foregoing, reconsideration and allowance of the claims as amended is respectfully requested.

Respectfully submitted,

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